Take Test: Quiz 3. Support vector classification

Test Information

Description	
Instructions	
Multiple Attempts	This test allows multiple attempts.
Force Completion	This test can be saved and resumed later.

QUESTION 1

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The SVM criterion takes into account the structural risk and the empirical risk. The optimization is intended to minimize both at the same time.

- (●) True
- ( ) False

QUESTION 2

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The SVM optimization is performed through a Lagrange analysis. It leads to

Question Completion Status:

- (●) The solution of the dual is always guaranteed because the matrix of the functional is non negative definite.
- ( ) The solution is guaranteed because the functional is the sum of a convex and a concave functions.

- [ ] The solution is never guaranteed.

QUESTION 3

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In a SVM classifier, the weight vector is a linear combination of the training data

- (x) True
- ( ) False

QUESTION 4

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In a Support Vector Machine, the solution depends on a subset of the training data.

- (x) True
- ( ) False

QUESTION 5

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The KKT conditions

- [x] are obtained from nulling the gradient of the lagrange functional with respect to the primal variables (except the complementary ones).
- [ ] The KKT conditions are obtained by nulling the gradient of the Lagrange functional wrt the primal and dual variables (except the complementary ones).
- [x] The complementary KKT conditions say that either the constraints or the corresponding Lagrange multiplier is zero.
- [x] The KKT assure that the constraints vanish from the Lagrangian at the optimal point.

QUESTION 6

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Click Save and Submit to save and submit. Click Save All Answers to save all answers.

- [ ] of the samples that are properly classified and inside the margin have a value strictly less than C.
- [x] of the samples that are inside the margin have a value equal to C.
- [x] of the samples that are misclassified and outside the margin are C

QUESTION 7

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All the dual variables are either 0 or C

- ○ True
- ● False